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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,786	09/17/2003	Shigeru Kuramoto	242926US0	2975

22850 7590 01/31/2006

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ALEXANDRIA, VA 22314

EXAMINER
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ALEXANDER, MICHAEL P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/663,786

Applicant(s)

KURAMOTO ET AL.

Examiner

Michael P. Alexander

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/17/03, 12/24/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS: 09/22/04.

### **DETAILED ACTION**

Claim(s) 1-10 is/are pending.

#### ***Election/Restrictions***

Applicant's election with traverse of Group I in the reply filed on 29 November 2005 is acknowledged. The traversal is on the ground(s) that (1) the Examiner has not carried the burden of Groups I and II are distinct, (2) that Groups I and II are linked, (3) that unity of invention exists between the Groups, and (4) the Examiner has not proven that a burden exists. This is not found persuasive because (1) the Groups are distinct because the process as claimed can be used to make a materially different product such as a titanium alloy containing combined amount of more than 3% by mass of oxygen, nitrogen and/or carbon, (2) none of the claims within Groups I or II are linking claims (see MPEP 809), (3) unity of invention is not the proper standard, and (4) the burden is shown by the fact that the inventions are distinct and the fact that the inventions would be classified separately.

The requirement is still deemed proper and is therefore made FINAL.

Claims 7-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 29 November 2005.

***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 09/20/2002. It is noted, however, that applicant has not filed a certified copy of the 2002-275171 application as required by 35 U.S.C. 119(b).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmed et al. (US 5,871,595).

Regarding claim 1, Ahmed teaches (col.2 lines 50-55) a titanium alloy comprising by mass percent: 20 to 40% Nb, 4.5 to 25% Ta, the total of Nb and Ta being between about 36.5 and 47%, the balance being Ti, which inherently satisfies the claimed formula.

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Still regarding claim 1, Ahmed teaches (col. 6 lines 17-20) that the alloy would further contain up to 0.5% by mass of at least one interstitial element selected from C, N and O, which overlaps with the claimed range, which is prima facie evidence of obviousness. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art to select the desired amount of C, N and O from the range disclosed by Ahmed because Ahmed teaches the same utility throughout the disclosed range.

Still regarding claim 1, Ahmed does not specify that the alloy would contain any Al. Therefore the alloy of Ahmed inherently satisfies the claimed limitation with respect to aluminum content.

Still regarding claim 1, Ahmed teaches (col. 4 lines 60-61) that the alloy would have an all beta structure.

Regarding claim 2, Ahmed teaches (col. 6 lines 17-20) that the interstitial would be O.

Regarding claim 3, Ahmed teaches (col. 2 lines 34-37) that the alloy would possess a modulus of about 50-60 Gpa.

Regarding claims 4-5, Ahmed does not specify that the alloy would have the claimed tensile strength or the claim elastic deformability. However, the Examiner asserts that the alloy of Ahmed would inherently have the claimed properties because the alloys have substantially the same composition and substantially the same processing (i.e. solution heat treatment to ensure an all beta structure).

Regarding claim 6, Ahmed teaches (col. 2 lines 50-55) that the alloy would comprise about 2.5 up to 13% Zr, which overlaps with the claimed range, which is prima

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facie evidence of obviousness. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art to select the desired amount of Zr from the range disclosed by Ahmed because Ahmed teaches the same utility throughout the disclosed range.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Alexander whose telephone number is 571-272-8558. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700